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(54) COMMUNICATION METHOD/DEVICE WITH DETECTION OF COMMUNICATION COLLISION

(57)Abstract:

PROBLEM TO BE SOLVED: To provide a collision detection method for highly using infrared band width which the multiplex access infrared (LAN can use by detecting the energy level of the electromagnetic wave of a second wavelength while first datum is transmitted through the use of a first wavelength and declaring collision when the energy level of the second wavelength exceeds a threshold.

SOLUTION: A duplex wavelength infrared transceiver 101 transmits a signal 361 in wavelength bands λ_1 and λ_2 and a transceiver 102 starts transmitting a signal 362 in the wavelength bands λ_1 and λ_2 . The duplex wavelength receiver 141 of the transceiver 101 receives the synthesized signal of the signals 361 and 362 in the wavelength bands λ_1 and λ_2 . When a duplex wavelength transmitter 121 does not transmit the signal 361 in the wavelength bands λ_1 and λ_2 , collision is declared at the time of detecting the synthesized signal of the energy level larger than the prescribed threshold for, the corresponding wavelength. Thus, collision is accurately detected.

